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TO STUDY CLINICAL PROFILE AND OUTCOME OF IUGR(INTRAUTERINE GROWTH RETARDATION) BABIES ADMITTED IN SMS MULTISPECIALTY HOSPITAL AND RESEARCH CENTRE , AHMEDABAD

Pediatrics

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ABSTRACT

Introduction: IUGR is characterized by a fetal growth rate that falls below the normal range considering the growth potential of a specific infant, taking into account factors such as race and gender. It represents a deviation from the expected fetal growth pattern. This deviation can occur due to inherent limitations in the fetus's growth potential or as a result of various adverse influences on fetal development.

Aim And Objective:

1) To study the Clinical profile of IUGR babies.
2) To study outcome of IUGR babies.

Materials And Methodology: Study Design: Prospective observational [Cross Sectional] study. **Study Population:** All newborns between age group 0 days to 28 days of age, onset of symptoms as per inclusion criteria whose parents were willing to give consent. **Study Setting:** NICU , department of pediatrics , Dr MK shah medical college. **Results:** Among the total study population of 120 IUGR babies, 70 [58.3%] were males and 50 [41.7%] were females Among the 120 study, 22 [18.33%] babies had birth weight between 1500 to 1799 gm, 80 [66.67%] babies had birth weight between 1800 to 2199 gm and 18 [15%] babies had birth weight between 2200 to 2500 gm. **Discussion:** Intrauterine growth retardation (IUGR) is a significant contributor to fetal and neonatal morbidity and mortality. The most common complication observed in this study was hypoglycemia, affecting 58.3% of infants. **Conclusion:** In a hospital-based cross-sectional study conducted in the neonatal intensive care unit (NICU) of a tertiary care hospital, 120 patients with intrauterine growth restriction (IUGR) were enrolled based on inclusion criteria. Among these IUGR babies, 58% were males and 42% were females. weight 2200 to 25

KEYWORDS

INTRODUCTION

IUGR is characterized by a fetal growth rate that falls below the normal range considering the growth potential of a specific infant, taking into account factors such as race and gender.

It represents a deviation from the expected fetal growth pattern. This deviation can occur due to inherent limitations in the fetus's growth potential or as a result of various adverse influences on fetal development.

Understanding the distinctions between IUGR and SGA is crucial for accurate diagnosis, appropriate management, and consideration of potential long-term implications for both mother and baby.

• SGA (Small for Gestational Age): Defined based on a cross-sectional evaluation, either prenatally or postnatally. This term is used for neonates whose birth weight falls below the 10th percentile for a particular gestational age or is two standard deviations below population norms on growth charts. SGA considers only birth weight without considering in-utero growth or physical characteristics at birth.(1

• Low birth weight (LBW) is a separate entity and should not be confused with IUGR/SGA, as the definition of LBW is based on the birth weight (less than 2,500 g) irrespective of gestational age, sex, race, and clinical features.(2,3)

AIM AND OBJECTIVE

• In both inborn and out born IUGR babies admitted in the Neonatal Intensive care Unit, SMS multispecialty hospital and research center , Ahmedabad
• 1) To study the Clinical profile of IUGR babies.
• 2) To study outcome of IUGR babies.

MATERIALS AND METHODOLOGY

• Study design: Prospective observational [Cross Sectional] study.
• STUDY POPULATION: All newborns between age group 0 days to 28 days of age, onset of symptoms as per inclusion criteria whose parents were willing to give consent.
• SAMPLE SIZE:120 IUGR babies were included in the study.
• Duration of data collection : June 2023 to December 2023
• Study setting : NICU , department of pediatrics , Dr MK shah medical college and research center ,Ahmedabad

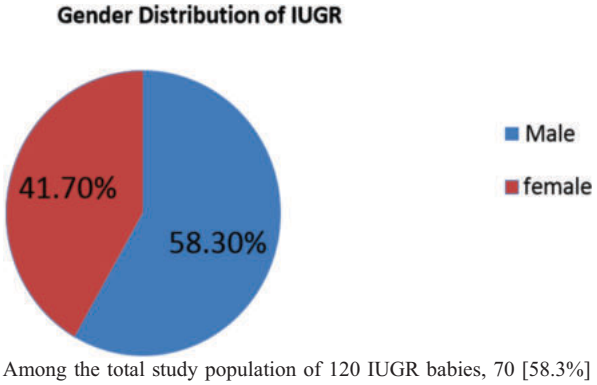
Inclusion Criteria

• All Intrauterine growth retardated babies admitted in NICU, tertiary care hospital.
• Birth weight : 1500 gm - 2500 gm
• Full Term Neonates
• Inborns and outborns

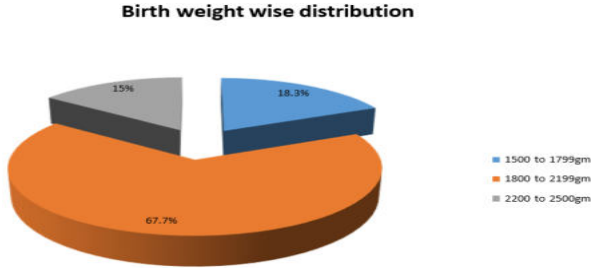
Exclusion Criteria

• Preterm
• > 28 days of age
• Not giving consent
• Birth weight less than 1500 gm

RESULTS AND DISCUSSION

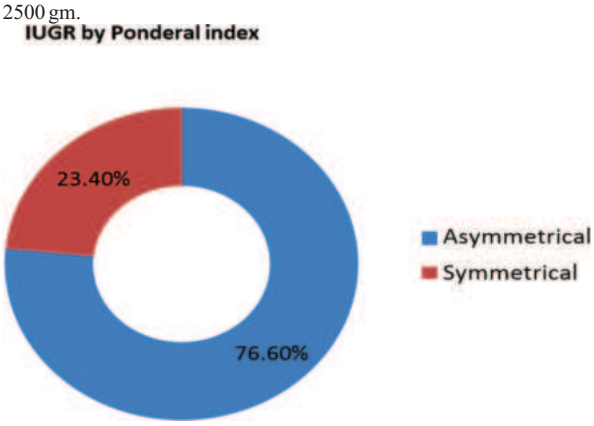


Among the total study population of 120 IUGR babies, 70 [58.3%] were males and 50 [41.7%] were females.

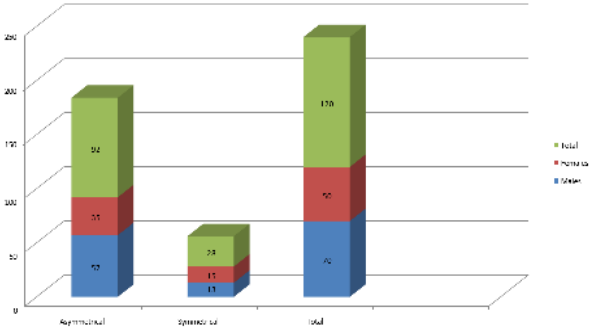


Among the 120 study, 22 [18.33%] babies had birth weight between

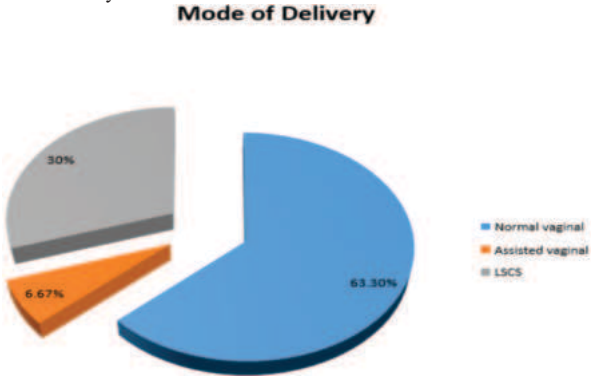
1500 to 1799 gm, 80 [66.67%] babies had birth weight between 1800 to 2199 gm and 18 [15%] babies had birth weight between 2200 to 2500 gm.



Among the 120 study population 92 [76.6%] babies were classified as asymmetrical IUGR and 28 [23.4%] babies were classified as symmetrical IUGR as per Ponderal index.



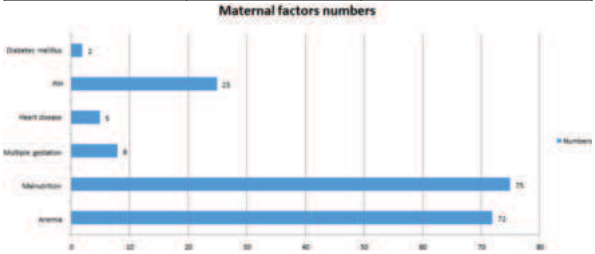
• Among 92 Asymmetrical babies 57 were males and 25 were females.
• Out of 28 Symmetrical babies 13 were males and 15 were females.



Of the 120 babies, 76 (63.3%) were delivered by normal vaginal delivery and 8 (6.67%) were delivered by Assisted delivery. 36 (30%) were delivered by Caesarian section.

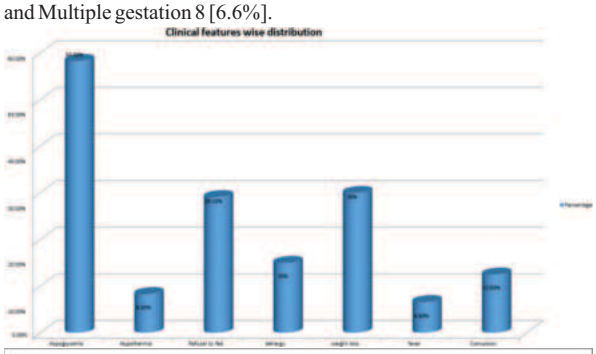
Maternal Factors Wise Distribution Of IUGR

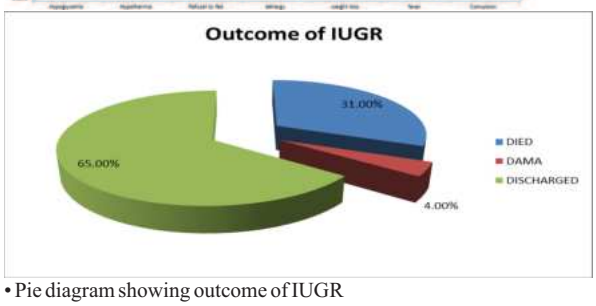
Maternal factors	Number	Percent
Anemia	72	60%
Malnutrition	75	62.5%
Multiple gestation	8	6.6%
Heart disease	5	4%
PIH	25	20.9%
Diabetes mellitus	2	1.6%



The above table shows the maternal factors with IUGR. Malnutrition was the commonest 75 [56.7%] maternal factor.

The other common factors were Anemia 72 [60%], PIH 25 [20.9%] and Multiple gestation 8 [6.6%].





• Pie diagram showing outcome of IUGR

DISCUSSION

• Intrauterine growth retardation (IUGR) is a significant contributor to fetal and neonatal morbidity and mortality.
• The most common complication observed in this study was hypoglycemia, affecting 58.3% of infants. Which is comparable with 63.3% hypoglycemia found in T. Diana et al.[4]
• Diminished glycogen reserves and reduced capacity for gluconeogenesis contribute to disturbed carbohydrate metabolism, making these infants highly susceptible to hypoglycemia.
• Sepsis was the second most common complication, affecting 48.3% of cases, which aligns with rates reported in other studies by Bandyopadhyay et al (47.8%).(5).Conclusion
• In a hospital-based cross-sectional study conducted in the neonatal intensive care unit (NICU) of a tertiary care hospital, 120 patients with intrauterine growth restriction (IUGR) were enrolled based on inclusion criteria. Among these IUGR babies, 58% were males and 42% were females.
• The mode of delivery indicated that 63.3% were delivered vaginally, 6.67% were delivered.by assisted vaginal delivery, and 30% were delivered by cesarean furthermore, 79.1% of IUGR babies had a birth weight less than 2 kg, and 20.9% had a birth weight of 2 kg or more, with 16.6% of outborn babies having a birth weight less than 2 kg.

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